000 objectives on schedule, flying high above adverse weather or dust-storms. For example, the York and Lancastrian services have one stop only between England and India—Lydda, the Palestine airport —and can complete the trip in eighteen hours' flying time. At present the old route is traversed by Dakota aircraft, which are obliged to re-fuel at Shaiba and Sharjah, but in the future, when larger and more powerfully-engined aircraft such as the York and Tudor types operate a regular service to the Far East, places like Sharjah and Jiwani will become obsolete.

652 The Sheikh of Sharjah derives a large proportion of his income
508 from rentals in connexion with the R.A.F. and civil air services. The rental for the camp and airport is considerable, but in addition to this he receives five rupees for each landing. During my stay at Sharjah the average number of landings per week, including R.A.F., American A.T.C., and British Overseas Airways, totalled about seventy in good weather, which represents a weekly income of £27 at the present rate of exchange. The sheikh is naturally anxious about the future, and whenever he called at the Fort or I visited his palace, he would enquire if I thought Sharjah would be retained as an air base. If a copy of this book ever reaches him, he will know by that time what the prospects are likely to be.

508 My own guess is that, so far as civil air-lines are concerned, Sharjah airfield will be used in the future only as an emergency landing ground. The modern trend in air services is for long-distance aircraft with one, or at the most two, stopping points, so that it is extremely unlikely that large passenger-carrying planes will land at Sharjah under normal conditions. From the operational point of view, the airfield is not suitable for present-day conditions. When it was first constructed, fifteen or more years ago, it was perfectly suitable for the D.H. 42's and other aircraft which pioneered the route, but times, and aircraft, have changed. The surface is very soft in parts, moreover, and rolling does not improve it; during the rains the sub-soil becomes boggy and clayish, and high-pressure tyres have been known to cut it up so severely as to put the airfield out of action for several weeks. It is below sea-level and becomes easily water-logged, is situated in an area subject to bad dust-storms and gales, and, due to the presence of high sandhills at one end and a creek at the other, extension of the runways beyond 2,000 yards is impracticable.

The airfield at Sharjah has been under review by the Air Ministry for several years, and at one time it was planned to lay

2: O'Shea G-3 (1944-1945) 1947 MK4 Trucial Oman MK4

down metal strips or even to construct a concrete surface. The advice of the Public Works Department was sought; they advised the Government that, since the ground was below sea-level and contained a veritable lake ten feet below the surface, the project would require an expensive pumping installation which, together with the materials, which would have to be imported from England, plus the skilled labour required, would cost not less than £1,000,000. The Air Ministry, looking for once into the future, and realizing that with new types of aircraft Sharjah might lose some of its former importance and usefulness, quickly decided that they would take no action. Thus, if the Sheikh of Sharjah or any of the Oman financiers imagine that the airfield is likely to become a 'Heath Row' of the East, they had better think again.

It is, of course, impossible to prophecy accurately the future of anything, but judging by present-day trends in aviation I do not think it is unduly pessimistic to foretell a day, perhaps in five or ten years' time, when Sharjah will be virtually closed down as a civil airport. I do believe it is likely, however, that it may be used by smaller aircraft, such as Dragon Rapides or Dominies and Lockheed types, which may operate shuttle services between bases on the Gulf. There is a tremendous trade in pearls and piece-goods between Arabia, Iraq and India, and time is an important factor in business to-day in the East. The modern Indian or Arab business man prefers to travel by plane, and I am confident that an internal air-line between Cairo and Karachi, stopping at Lydda, Baghdad, Basrah, Bahrain and Sharjah *en route*, would have a steady and growing demand. If such an air-line is not operated by British Overseas Airways, then it is fairly certain that an Indian civil air organization will obtain permission to operate one.

The American air authorities are extremely anxious to operate air-lines on this route, over which they have been flying military planes since 1942, and there is little doubt that they would welcome the opportunity of running short feeder services between Baghdad and Karachi, via Sharjah, if the British Government decided not to continue operating on this route. The Americans, who were represented at Sharjah by a unit of Air Transport Command, had an efficient air-line organization at Sharjah in 1945. It was built almost entirely by the Air Ministry Public Works Department, and the erection of buildings and hangars had priority over the R.A.F. and B.O.A.C. Flying Control management was shared by the A.T.C. and the R.A.F., whilst the Americans had their own

2: O'Shea G-3 (1944-1945) 1947 MK4 Trucial Oman MK4

extremely accurate meteorological service. They were independent for water supply and electric power, and their organization from every point of view was impressively efficient. A considerable number of their pilots, ground staff and administrative officers and engineers were former employees of Pan-American Airways and American Export Lines.

From conversation I had with some of the senior American officers, it was perfectly clear that they anticipated no difficulties in operating civil air-lines on this route after the war. It was true that the buildings and installations had been erected by British labour, and not by themselves (a condition necessitated by the treaty with the Trucial Oman sheikhs, whereby foreign nations were prohibited from acquiring political or commercial interests in the territory), but the American viewpoint seemed to be: 'we have expended millions of dollars in operating an efficient war machine in the Persian Gulf, and thus helping you to win the fight in Burma. It is only right that we should be allowed to run a civil air-line on this route in peace-time, especially if you do not want to use it.'

Whatever the rights of the case may be, there can be little doubt that, at the present stage of British aircraft development, American air-lines such as Pan-American would soon, from the commercial point of view, 'drive us out of the air' if they operated on this route; against their larger, faster, and more efficiently run planes, we should be left standing and British prestige in India and the Middle East would suffer a serious set-back.

Commercially and strategically, the Persian Gulf has always been one of our life-lines; progress in aviation has not lessened its importance. It is essential for us to maintain an air-line between India and the Middle East, even if it be merely a token service, and the purpose of this could be achieved economically by the operation of internal feeder lines to cope with passengers and freight. If the British Government has the foresight to undertake such a service, Sharjah and the other small intermediary bases will continue to be used for many years.

Regarded from the angle of military strategy alone the Persian Gulf area will continue to dominate the scene of international politics for many years. For one thing, it is in the middle of our vital sea-lines to India, dividing Asia from the Middle East and West, and provides harbours, anchorages and re-fuelling ports which are essential in war-time. The country which has full armed control of the Trucial Oman Coast, which it could use as the main

3: Melamid S-3 (no date) 1954 MK4 Trucial Oman MK4

TABLE I—SUMMARY OF CHANGES IN TRUCIAL SHEIKHDOMS

TRUCIAL SHEIKHDOM	RECENT CHANGES
ABU DHABI	The largest Trucial sheikhdom, territorially better consolidated than before. Prospecting for oil proceeds on land; oil, of a better quality than the other Arabian oils, has been discovered at Murban (about 23° 50′ N. and 53° 45′ E.), but the full significance of the discovery has not yet been evaluated. A new oil concession, to last 65 years, for the offshore subsurface rights in the Persian Gulf, as defined in the 1951 arbitration award, was granted to a combination of British (Anglo-Iranian Oil Company) and French companies in March, 1953; the area is described as exceeding 12,000 square miles (no information has been released to show how this figure was calculated); under the terms of the concession, exploration must begin within a year, and drilling within five years.
DIBAI	The town of Dibai is expanding rapidly; its population is now estimated at 38,000. Two commercial banks and a hospital have been established, and there are regular bimonthly mail-steamer connections with Iraq and India. In view of the growth of Dibai, the headquarters of the British Political Agent for Trucial 'Oman are being transferred there from Sharjah. An offshore concession described as covering 1300 square miles was granted in August, 1952, to the same group of companies that have obtained the Abu Dhabi offshore concession; the terms also are the same, except that the duration is limited to 60 years. Drilling to 12,000 feet has produced no oil so far.
SHARJAH	Probably now the second largest of the Trucial sheikhdoms; includes the inland oasis of Dhaid and the town of Kalba, on the Gulf of 'Oman. The aerodrome near the town of Sharjah is served by three flights a week from Bahrein, the only regular air service to Trucial 'Oman.
AJMAN	No change.
UMM AL QAIWAIN	" "
RAS AL KHAIMA	" "
FUJAIRA	Trucial sheikhdom since 1952; economically unimportant.

by the Sultan of Muscat and 'Oman. After some skirmishes between the troops of Saudi Arabia and British-officered Trucial 'Oman levies, a standstill agreement, similar to the Palestine armistice agreements, was reached, which stabilized for the time being the positions occupied by the various states and armies. Owing to the location of Hamasa between the other villages of the oasis, this standstill agreement has resulted in some form of blockade of the forces of Saudi Arabia there; Saudi Arabian efforts to supply Hamasa have led to further bloodshed and complaints to the United Nations. Since the oasis of Buraimi contains the only sizable wells in the eastern Rub' al Khali desert, possession of, and free access to, all or parts of it is important to anyone who desires to rule, and exploit the minerals of, the Empty Quarter of Arabia. Several suggestions for amicable settlement or arbitration of the dispute have been made, particularly by the new King of Saudi Arabia (*New York Times*, Nov. 11, 1953). In view of the importance of the oasis, definite boundaries between Saudi Arabia, Trucial 'Oman, the Sultanate of Muscat and 'Oman (in whose Dhofar region a group of American oil companies has a concession), and possibly Aden Protectorate may now be established, though the process of definition would take some time. All the oil companies operating in the states concerned have announced their agreement to any new boundaries that may be drawn.—ALEXANDER MELAMID

PHYSICAL GEOGRAPHY

ARID ZONE RESEARCH. "Reviews of Research on Arid Zone Hydrology" (Paris, 1953) is the first fruit of UNESCO's Arid Zone Programme, which had its beginning in 1948. For study purposes the arid lands of the world were divided into eight regions—